

IV. *Descriptions of new species of Lucanoid Coleoptera; with remarks on the genus Cantharolethrus, and supplementary list.* By Major F. J. S. PARRY, F.L.S. (including descriptions by M. Snellen Van Vollenhoven, and Prof. Westwood, M.A., F.L.S.).

[Read 5th February, 1872.]

Sphenognathus armatus, ♂ Parry, n. s. (var. max.).

Pl. I. fig. 3.

S. viridi-opacus metallicus, brunneo-tinctus, partim nitente cupreo-viridis. *Pedes* concolores. *Mandibulæ* capite prothoraceque paulo breviores, robustæ, porrectæ, leviter arcuatæ, granulosæ, apicibus curvatis; supra in medium elevatæ, et prope basin denticulo suberecto, instructæ, interne fere ad apicem serratæ. *Caput* transversum, lateribus fere rectis; antice elevato-emarginatum, cum prothorace grosse et irregulariter punctatum, angulis ante oculos acutis (antennæ mutilatæ). *Prothorax* transversus, convexus, lateribus subrotundatis, minute crenulatis, angulis posticis obliquis, denticulo parvo instructis; disco basi binodoso et prope angulos posticis impressione profundo notato. *Elytra* prothorace latiora, elongata, convexis, fere parallela, sub lente minute granulosa, irregulariter vermiculata, prope scutellum glabra; angulis humeralis rotundatis; scutello subrotundato, tenuiter punctulato. *Pedes* robusti, tibiis anticis intus et extus, fortiter sed irregulariter armatis; tibiis, 4 posticis, spinis acutis 8 vel 9 instructis; tarsis ciliatis. Corpus subtus scutello regioque valde et longe fulvo- aut griseo-pilosa. *Mandibulæ* intus pone apicem, caput, prothoracis latera, femoraque subtus, pube fulva, longe, irregulariter et obsolete, tectis.

Hab.—Colombia. Mus. Saunders.

Long. corp. lin. 15; lat. lin. 7; long. mandib. lin. 5.

This interesting new species, is allied both to *S. Lindenii* and *S. Feisthamelii*, but its conspicuously greater length and width, in comparison with all the other species of the genus (*S. Granti* excepted), as well as its

other characters, renders it amply distinct. It differs from *S. Lindenii* as follows:—The mandibles are more robust and arcuate, considerably more elevated on the upper surface; the prothorax much wider, with its punctuation considerably stronger, the posterior angles more rounded; the elytra are wider at the base, consequently more parallel. The character of the sculpture, especially near the apex, is more strongly vermiculate; the legs considerably more robust, with the denticulation of the tibiæ, infinitely more pronounced than in any other species of the genus with which I am at present acquainted. In reference to *S. Lindenii*, the armature of the four posterior tibiæ is entirely wanting. The sparse and irregular character of the pubescence exhibited on the upper surface, in comparison with that existing underneath, may show, perhaps, only an abnormal condition, caused by friction. The upper surface, when the insect is in its normal state, may probably prove to be villose, perhaps only on the prothorax and mandibles, a condition sometimes to be met with, but rarely, in other allied species. I am indebted to W. Wilson Saunders, Esq. for the opportunity of describing this new insect, as well as others hereafter mentioned.

S. armatus (?), ♀ (an sp. nov. ?).

S. nigro-castaneus, obscure æneo-tinctus. *Mandibulæ* curtæ, robustæ, granulosæ, extus prope basin rotundatæ, intus excavatæ, denticulatæ. *Caput* quadratum, antice elevato-binodosum, ante oculos tuberculo parvo instructum, cum prothorace rude et irregulariter punctatum. *Prothorax* transversus, subconvexus, lateribus minute crenatis, in medio longitudinaliter canaliculatus; angulis anticis rotundatis, posticis paullo emarginatis, acutis. *Elytra* prothorace latiora, convexa, parallela, confertim granuloso-subvermiculata, circa scutellum glabra, minute punctulata; angulo humerali rotundato. *Scutellum* semicirculare, punctulatum. *Pedes* robusti, rugoso punctati; ciliati; tibiis anticis et intermediis, spinis quatuor, posticis tribus, armatis. Corpus subtus sparsim et irregulariter pilosum.

Long. corp. lin. 9.

Hab.—Bogota. Mus. Parry.

The insect now noticed differs so perceptibly from all other females of the species belonging to the genus, that I have no hesitation in recording it as being distinct, and I am much inclined to assume the probability of its eventually proving to be the ♀ of *S. armatus*; this conjecture must not, however, be taken as a definite conclusion. It assimilates with *S. armatus*, ♂, in having the same convex and parallel formed elytra, together with the vermiculate sculpture exhibited on their upper surface, although somewhat closer and strongly defined, this latter character may, however, be only sexual; it has, further, the same robust similarity in the appearance of the legs, as well as in the strongly armed tibiæ; this last character, as previously stated, in respect to *S. armatus*, ♂, is certainly not to be met with in the females of any other allied species. With regard to the coloration: in the male it is characteristic as being “æneus, brunneo-tinctus;” whilst in the female it is noted as “brunneus, æneo-tinctus;” such variety of character is often exhibited in the females of other allied species. The legs of both insects are unicolorous, whilst the tibiæ of nearly all the other allied species have been described by the several authors as being of a light reddish-brown. With reference to the villose texture which is exhibited so strongly underneath, and, somewhat sparsely, on the upper surface of *S. armatus*, ♂, in the female insect there exists only considerable marks of such pubescence underneath, and, on the upper surface, traces only of this character are to be found at the exterior base of the mandibles, on the anterior margin of the prothorax, round the eyes, and also in the space between the base of the elytra and prothorax; in reference, however, to the last character alluded to, the insect may not, I apprehend, be in its normal condition. In conclusion, it may, I think, nevertheless be affirmed, that if the insect in question is not sexually related to *S. armatus*, ♂, it must be regarded as the female of another species, the male of which is at present unknown.

Genus CANTHAROLETHRUS, Thomson, Ann. Soc. Ent.
Fr. 1862, p. 411.

Sp. 1. *C. Luxerii*, ♂, Buquet, Ann. Soc. Ent. Fr. 1843, Bulletin, p. li. (*Dorcus*), Colombia; *C. Luxerii*, ♂, Parry, Cat. pl. IX. fig. 6; *C. Georgius*, ♂, Thomson, loc. cit., Colombia.

(?) Sp. 2. *C. Reichii*, ♀, Hope, Trans. Ent. Soc. ser. i. vol. IV. p. 182, pl. 13, fig. 3 (*Pholidotus*), Colombia; *C. Reichii*, ♂, Thomson, *loc. cit.*

Sp. 3. *C. Buckleyi*, ♂ ♀, n. sp., Ecuador.

The type specimen (♂) from which both M. Buquet and Mr. Thomson described their remarkable and interesting species of Lucanoid Coleoptera was, up to a very recent period, unique in Count Mniszech's collection; three or four specimens, however (males), were received by Mr. Janson from N. Granada during the past year, but, unfortunately, no female was contained in the collection. These specimens have been distributed in the collection of the British Museum, of Mr. W. Wilson Saunders, and in my own. M. Buquet's description of *C. Luxerii* is given entirely in French; Mr. Thomson's characters, both of the genus and the species, in Latin, are *in extenso*. A second species of the genus, also recorded by Mr. Thomson in the same publication, was founded upon an insect originally described in the Transactions of our Society by the late Rev. F. W. Hope, under the name of *Pholidotus Reichii*, ♀; it was located by Mr. Hope, but with some hesitation, in the genus *Pholidotus*. Mr. Thomson, in his publication, inclines to the opinion that *Pholidotus Reichii*, Hope, is identical with the insect he describes under the name of *Cantharolethrus Georgius*; the probability as to the former insect being the female of the latter (or perhaps of another closely allied species), was also alluded to in my Catalogue of the Lucanoid Coleoptera (*vide* Tr. Ent. Soc., 1870). The question as to the sexual affinity between the two insects may now, I further apprehend, be definitively settled; as the female of another species assimilating closely to *C. Reichii* has recently been discovered by C. Buckley, Esq., during his recent travels in the States of Ecuador. It was taken, together with several male specimens, in the interior of some rotten wood; a description of this new species is now added under the name of *C. Buckleyi*. Mr. Thomson appears to be in error in stating that a specimen of *C. Reichii* is to be found in the Hopeian Cabinet; hitherto this insect has, I believe, remained unique in his own collection, having been obtained from that of the Marquis de la Ferté, and is, probably, the identical specimen from which Mr. Hope's description and figure were taken. For the sake of comparison, in respect to certain differen-

tial characters existing between *C. Luxerii* and *C. Buckleyi*, extracts from the descriptions given by Mons. Buquet and Mr. Thomson are quoted. Mons. Buquet says:—

“The *mandibles* are one-third longer than the head and prothorax together, wide and flat upon their upper surface, bifurcate at their extremity, emarginate and armed with a strong tooth close to the apical termination; *antennæ* the length of the mandibles, the joints being flattened from the second, the sixth joint being considerably more dilated, the four last joints, which form the clava, being short. *Prothorax* convex, narrow in front, broad at the base, finely punctured above, and rugose underneath; the posterior angles deeply emarginate, forming a very acute angle. *Elytra* oval, elongate, rounded at the extremity as well as at the humeral angles.

Mr. Thomson's description of *C. Georgius* is as follows:

“*Mandibulæ* elytris longiores, subrectæ, validæ, singulæ post medium intus dente sat valido armatæ, versus apicem extus abrupta, truncatæ, apiceque valde bifidæ; *antennæ* elongatæ, mandibulis longiores, 10-articulatæ, scaphus prothorace longior, articulis 3, 4, 5, 6 gradatim decrescentibus, clava 4-articulato; *prothorax* subtrapezoidalis, ad angulos laterales posticos latiori illos productos acutos; capite vix longior, marginibus anticis posticisque sinuatis. *Elytra* oblonga ad humeros latiora, margine paulo reflexo, apice rotundata.”

This description of the insect appears in the main to correspond with that of Mons. Buquet, with the exception that the author does not allude in any way to the humeral angles of the elytra, which Mons. Buquet states to be rounded.

C. Buckleyi, n. sp. ♂, Parry (var. max.). Pl. I. fig. 1.

C. niger, nitidissimus, glaberrimus. *Mandibulæ* elytris breviores, robustæ, arcuatæ, fere cylindricæ, punctatæ, intus prope basin binodosæ; apicibus bifurcatis, intus post medium emarginatis dente, acuto armatis. *Caput* magnum, punctatum, antice fortiter emarginatum; angulis ante oculos productis; disco triangulariter excavato; clypeo parvo, binodoso. *Antennæ* elongatæ, mandibulis

longiores; articulis cylindricibus. *Prothorax* transversus, supra sparsim, infra fortiter et rugose, punctatus; lateribus productis, rotundatis, minute crenatis, angulis posticis, emarginatis, tuberculo acuto instructis; in medio leviter longitudinaliterque canaliculatus. *Elytra* glabra; lateribus irregulariter indentatis; linea marginali paulo reflexa; angulis humeralis spina obtusa instructis. *Scutellum* subrotundatum, in medio punctulatum. *Pedes* punctati; tibiis anticis prope apices spinis 3 vel 4, minutis, armatis, intermediis posticisque simplicibus.

Long. corp. unc. 1, lin. 2; long. mandib. lin. 5.

Hab.—Ecuador, Amer. merid. Muss. Brit. et Parry.

There is indubitably a very strong facial appearance of great similarity between the two insects in question, but the following differences are, I think, quite sufficient to prove their non-identity. The general appearance of *C. Buckleyi*, ♂, is somewhat more shining, the mandibles are shorter and more robust, broader at the base, being also more arcuate; the joints of the antennæ, between the funiculis and the clava, are cylindriform, instead of flat, as in *C. Luærii*; they are also longer, consequently the scapus is visibly more elongate, the dilatation at the extremity of the sixth joint is not quite so pronounced, the seventh or basal joint of the clava (which, according to the author, is composed of four joints) is considerably longer. The clypeus in *C. Buckleyi* is, moreover, binodose at the extremity, whilst in the allied species it is simple. The head is much broader, more excavated in front, with the anterior part more emarginate. The prothorax is of a totally different form, being prominently wider, and rounded at the sides, with the posterior angles considerably less acute; and, finally, the elytra are slightly longer, with the humeral angles acute instead of being rounded.

C. Buckleyi, ♀. Pl. I. fig. 2.

C. niger. *Mandibulæ* parvæ, rugosæ. *Caput* fere quadratum fortiter rugoso-punctatum, angulis ante oculos rotundatis. *Prothorax* transversus, valde varioloso-punctatus, disco in medio et prope lateribus, longitudinaliterque, lineis rugosis, elevatis, irregulariter, instructus; lateribus serratis, angulis anticis prominulis cum posticis

emarginatis, spina acuta instructis. *Antennæ* capite mandibulisque paulo longiores; articulis cylindricis. *Elytra* elongata, disco subvelutinoso-opaco; linea sinuata utrinque, elevata et obsolete punctata, e spina humerali fere ad medium descendente notata. *Scutellum* parvum, grosse punctulatum, nitidum; angulis humeralis spina acuta instructis; linea suturali, glabra, nitida. *Corpus* infra nigrum; pectore fortiter varioloso-punctato. *Pedes* punctati; tibiis omnino simplicibus.

Long. prothoracis cum cap. et mand. lin. 5. Elytr. lin. 6.

Hab.—Ecuador. Mus. Parry.

Not being in a position to avail myself of a comparison between the two insects, viz., *C. Reichii* and *C. Buckleyi*, it is impossible to point out the special differences which I have no doubt exist in the females, as well as in the males of the respective species, as already alluded to. The only difference I have detected from reading Mr. Thomson's description of *C. Reichii*, ♀, is, that with reference to the elytra, the author says, "*humeris prominulis, rotundatis*," whilst in *C. Buckleyi*, ♀, the humeral angle is acute, and furnished with a spine; this same difference has been pointed out as existing in the males of the two species.

In Mr. Hope's description of *C. Reichii*, the rich opaque velvet appearance exhibited in the elytra is not alluded to, neither is there any notice as to the character of the humeral angle: the author describes the *length* of the insect as being 15 lin., whilst the length of *C. Buckleyi*, is only 11 lin. Mr. Thomson gives the length of *C. Reichii* as 30 mill., being considerably in excess of *C. Reichii*, Hope. The insects now described, were found, as previously stated, by Mr. Buckley, at the same time, and in the same position (the interior of rotten wood), thus proving, as far as possible, their conjugal affinity; only *one* specimen of the female was obtained. These interesting insects formed part of a large and rich collection of Coleoptera that Mr. Buckley has brought back from his recent scientific expedition to Ecuador. His safe return will, I am sure, be hailed with much satisfaction by the members of the Entomological Society.

Leptinopterus affinis, ♂, Parry, n. s. (var. max.: ♀ *ignota*).
Pl. I. fig. 5.

Affinis L. V-niger, nigro-piceus. *Mandibulæ* capite prothoraceque paullo longiores, deplanatæ, irregulariter arcuatæ, intus tuberculis parvis quatuor, pone apicem processuque bifido, instructæ. *Caput* prothorace paullo angustius, antice emarginatum, ante oculos fortiter angulatum; lateribus fere rectis. *Prothorax* bifoveatus; in medio longitudinaliter leviterque canaliculatus; scutello ciliato. *Elytra* testacea, prope scutellum plaga triangulari notata; angulis humeralis tuberculo parvo instructis. *Pedes* inermi; femoribus in medio rubro-maculatis.

Long. corp. lin. 7; mandib. lin. 3.

Hab.—In Brasilia merid. apud fluvium Paranam.

There is great affinity between this insect and *L. V-niger*, Hope (*triangularis*, Burm.); but after comparing it with several specimens of the latter species, I find the following marked differences between the two; the mandibles are not regularly arcuate, becoming abruptly incurved, near the apex; the prominent subapical bifid tooth I have in no case met with in specimens of *L. V-niger*; moreover, the mandibles are, internally, considerably more emarginate near the apex. The two foveæ, exhibited on the disc of the prothorax, are also peculiar to this species (unless they may ultimately prove to be abnormal). The triangular plaga on the elytra is considerably smaller, originating at a very slight distance only from the scutellum, whereas, in the former, it proceeds almost from the humeral angle; the punctuation of the elytra is also scattered and sparse, whereas, in *V-niger* it is lineo-punctate; the legs, moreover, are entirely black, with the exception of the femora being rufous in the centre, whilst in *L. V-niger* the legs are constantly red. This species belongs to the second section of the genus, having the armature of the mandibles symmetrically placed on each side.

Leptinopterus Paranensis, ♂, Parry, n. s. (var. max.: ♀ *ignota*). Pl. I. fig. 4.

L. niger, opacus, sub lente minute punctulatus. *Mandibulæ* graciles, leviter arcuatæ, fere cylindricæ, intus excavatæ, tuberculo obtuso prope basin; spina minima

ante medium, dentibusque duobus subapicalibus, instructæ. *Caput* quadratum, margine antico emarginato, angulis ante oculos obliquis. *Prothoracæ* transversus, angulis posticis emarginatis, vix tuberculatis. *Elytra* brevia, prothorace angustiora, angulo humerali spina minuta instructo. *Pedēs* nigri; tibiis anticis spinis tribus prope apices armatis, 4 posticis inermibus; tarsis ciliatis.

Long. corp. lin. 7; mandib. lin. 3. Mus. Saunders.

Hab.—In Brasilia merid. apud fluvium Paranam.

The slender cylindriciform mandibles, the short and narrow elytra, together with the entire absence of golden pubescence on the scutellum, and on the anterior margin of the prothorax, readily characterize this insect as being distinct from any other allied species of the genus which has at present fallen under my notice; it is to be located in the second section of the genus.

I have been requested by Mons. Snellen van Vollenhoven, of Leyden, to submit to the Society upon the present occasion, the description (accompanied by a figure) of a new and interesting species belonging to the genus *Prosopocoilus*. The insect in question is peculiarly remarkable, as being the only one belonging to the genus in which the coloration is found to be *æneous*.

Prosopocoilus Rosenbergii, Vollenh., n. s. Pl. II. fig. 1:

“P. æneus, nitidissimus, latus; capite magno, impunctato; mandibulis forcipiformibus, intus serratis, apice dentibus tribus divaricatis desinantibus; dentibus illis, antennis, palpis et tarsis, nigris.”

“Long. lin. 28.”

“*Hab.*—Java, interior (?).”

“Body above and beneath, of a coppery-brass colour, large and stout of dimension. Head broad, depressed, deeply emarginate in front, not punctate, but of the same colour as the thorax and elytra. Mandibles somewhat shaped like those of *Pros. forceps*, Voll., but elevated towards their ends, concave at the outer side, with a small interior tooth at the base, and four or five at the end of the inner ridge; the apex of each mandible is

divided into three larger teeth, which are deeper in colour, as also are the labrum and the sides of the head. The palpi shining black. Eyes chestnut colour, the canthus in front ending in a black knob where the posterior canthus terminates, so that it is difficult to distinguish even with a good glass, whether the canthus is entire or not. Prothorax broader than either head or elytra, shining, but punctate on the anterior part, very convex in the centre, the lateral tooth subacute. Scutellum with a golden tinge, edged with black, with some few scattered punctures. Elytra shining, minutely punctate, with a single short row of somewhat greater punctures, all the edges blackish. There is a small longitudinal black impression in the middle of the underside of the metathorax. Legs stout; all the tibiae with scattered punctures, out of which arise short golden hairs. Tarsi and claws shining black."

"The only specimen of this magnificent species was brought to Europe by Baron Von Rosenberg, who obtained it at Java, where it was found in the Botanical Garden of Buitenzorg. There is some doubt as to its being a Javanese insect, and it seems rather probable that it was imported from Siam, since a great number of trees and plants had been brought, in the preceding year, from that country to the botanical garden."

Prof. Westwood has favoured me with the following description.

Ceratognathus rufipennis, Westwood, n. sp. Pl. II. fig. 2.

"*C. niger, nitidus*; capite rugoso, in medio verticis tuberculo transverso, bipartito, notato; mandibulis capitis longitudine, supra parum subangulatis, haud auriculatis, apice bifido; prothorace cicatricoso-punctato, spatiis nonnullis discoidalibus lineaque mediana postica laevibus; elytris rufis, rugoso-punctatissimis, singlo 4 costatis costis 2° et 4° e sutura magis elevatis, ante apicem desinentibus; pedibus sat gracilibus, tibiis anticis bidentatis, posticis emarginato-incisis; corpore infra nigro, nitido, cum mandibulis et femoribus punctatis, serie punctorum majorem prope marginem posticum segmentorum abdominis, notato."

"Long. corp. lin. $4\frac{1}{3}$."

"*Hab.*—Albany, King George's Sound (Brewer). In Mus. Saunders."

I avail myself of the present occasion to notify the following numerical rectifications found to be requisite since the publication of my Catalogue of the Lucanoid Coleoptera in 1870 (*Vide* Tr. Ent. Soc. 1870, pp. 104-116).

NEW SPECIES.

1. *Sphenognathus armatus*, ♂ ♀, Parry, *ante* p. 33. Mus. Saunders, ♂; mus. Parry ♀.
2. *Lucanus*, ♀, inedit Formosa. Mus. Parry.
3. *Rhætulus crenatus*, ♂, Westwood, Tr. Ent. Soc. 1871, p. 353. Mus. Parry.
4. *Prosopocoilus Rosenbergii*, ♂, Voll., *ante* p. 81. Mus. Leyden.
5. *Cyclommatus*, ♀, inedit, Borneo bor. Mus. Parry.
6. *Cantharolethrus Buckleyi*, ♂ ♀, Parry, *ante* pp. 77, 78. Mus. Parry.
7. *Leptinopterus affinis*, ♂, Parry, *ante* p. 80. Mus. Saunders.
8. *Leptinopterus Paranensis*, ♂, Parry, *ante* p. 80. Mus. Saunders.
9. *Dorcus suturalis*, ♂, Westwood, Tr. Ent. Soc. 1871, p. 358. Mus. Parry.
10. *Dorcus raticionativus*, ♂, Westwood, Tr. Ent. Soc. 1871, p. 356. Mus. Parry.
11. *Dorcus glabripennis*, ♂, Westwood, Tr. Ent. Soc., 1871, p. 359. Mus. Parry.
12. *Apterocyclus Honoluluensis*, ♂ ♀, Waterhouse, Tr. Ent. Soc. 1871, p. 315. Mus. Brit.
13. *Ceratognathus rufipennis*, ♂, Westwood, *ante* p. 82. Mus. Saunders.

The following species were inserted in the Catalogue under MS. names; descriptions have since been published.

1. *Lissotes Launcestoni*, ♂, Westwood, Trans. Ent. Soc. 1871, p. 365.
2. *L. latidens*, ♂, West., *loc. cit.*, p. 363.
3. *L. subcrenatus*, ♀, West., *loc. cit.*, p. 368.
4. *L. furcicornis*, ♂ ♀, West., *loc. cit.*, p. 362.
5. *L. forcipula*, ♂, West., *loc. cit.*, p. 366.

Species recorded as wanting to my Collection in 1870, but since added.

1. *Colophon Thunbergii*, Westwood.
2. *Odontolabis Burmeisteri*, Hope.
3. *Odont. striatus*, Deyrolle.
4. *Cantharolethrus Luxerii*, Buquet.
5. *Platycerus cœrulescens*, Leconte.
6. *Nigidius Parryi*, Bates.
7. *Nigidius Formosanus*, Bates.

Number of species recorded in 1870	357
Number added in 1871-2	13
Total	370
In Mus. Parry	302
Desiderata	68

Explanation of the Plates.

PLATE I.

- Fig. 1. *Cantharolethrus Buckleyi*, Parry, ♂.
2. *C. Buckleyi*, Parry, ♀.
3. *Sphenognathus armatus*, Parry, ♂.
4. *Leptinopterus Paranensis*, Parry, ♂.
5. *L. affinis*, Parry, ♂.
6. Head of *Odontolabis Stevensii*, Thomson, ♀, exhibiting singular malformation of the antennæ.
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PLATE II.

- Fig. 1. *Prosopocoilus Rosenbergi*, v. Voll., ♂; 1a, b, apex of mandibles; 1c, side of head; 1d, antenna.
2. *Ceratognathus rufipennis*, Westw., ♂; 2a, maxilla and palpus; 2b, labium and palpi.
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